Jean-Pierre Roth: Highly leveraged institutions and financial stability – a case for regulation?

Address by Mr Jean-Pierre Roth, Chairman of the Governing Board of the Swiss National Bank and Chairman of the Board of Directors of the Bank for International Settlements, at the Second Conference on Law and Economics of Risk in Finance, University of St. Gallen, St. Gallen, 29 June 2007.

The author thanks Ms Jeanette Henggeler-Müller, Financial Stability Unit of the Swiss National Bank for the first draft of this paper.

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Highly leveraged institutions (HLIs), or hedge funds, are currently a hot topic. No day passes without a warning about HLIs in the financial press, and HLIs are on the agenda of politicians, supervisors and central bankers in many countries. The German presidency of the EU and the G8 have declared HLIs to be a high priority agenda item.

After the collapse of LTCM, the then chairman of the Federal Reserve Bank said that "had the failure of LTCM triggered the seizing up of markets, substantial damage could have been inflicted on many market participants, including some not directly involved with the firm, and could have potentially impaired the economies of many nations, including our own"[1]. And in the newspaper *Bild am Sonntag* of 17 April 2005, the German *Bundesminister für Arbeit und Soziales* accused HLIs of "remaining anonymous, having no face, pouncing on firms like locusts, grazing them and moving on."

Why is there such distrust of HLIs? There are several reasons: HLIs are perceived as a highly risky industry which is not subject to supervision. HLIs are perceived as non-transparent and opaque. HLIs use complex financial instruments and employ non-traditional investment strategies, partially based on complex mathematical models. HLIs are active shareholders, as the recent example of ABN Amro showed. HLIs are part of the glamorous world of high-net-worth investors and high-salary investment managers. And, probably most important, in recent years, the importance of HLIs has grown tremendously.

Why is the risk they pose to financial stability perceived as being so high? HLIs account not only for a significant share of trading volume in some market segments, especially complex ones, they are also important counterparties and clients which provide a significant source of revenue for large international banks.

This raises the question of whether HLIs are indeed a threat to financial stability and, if so, whether there is a need for regulation. These are the two questions we will try to answer in this paper.

To begin with, let me point out what central banks understand by financial stability and why we consider financial stability to be important.

In our view, a financial system should be able to absorb shocks affecting financial institutions (e.g., banks) and/or links between institutions (e.g., payment systems) without jeopardising the system's vital functions such as financial intermediation, i.e. the transfer of funds from savers to investors, monitoring debtors and transporting payments between economic agents. Financial stability does not mean that bank insolvencies should be excluded or that stock markets should develop smoothly.

We are concerned about financial stability because of the macroeconomic implications of financial turmoil. First, financial stability is a prerequisite for the successful implementation of monetary policy. Second, a stable financial sector is necessary for the smooth functioning of the economy as a whole. Third, central banks have an interest in financial stability because they know that in the event of financial crisis their role as ultimate liquidity provider could interfere severely with their traditional objective of price stability.

[1] Greenspan, 1998.

1. The HLI industry

In order to assess whether HLIs constitute a major risk to financial stability, it may be helpful to discuss the exact meaning of the terms "highly leveraged institution" and "hedge fund". Legal – or any other generally accepted – definitions do not exist yet. However, there are several characteristics that such institutions have in common. They are privately offered investment vehicles that pool the investments of high-net-worth individuals and family businesses, the HLI managers themselves and, increasingly, institutional investors. Often there are minimum investment requirements that restrict access to HLIs. Thus retail investors are mainly indirectly exposed to HLIs: actively through investments in funds of funds or passively through pension funds. HLIs deploy active investment strategies to pursue superior absolute return. Usually HLIs also employ leverage. HLIs are only lightly regulated and are not subject to supervision. They are largely exempt from reporting and disclosure requirements and there are no restrictions with regard to investment strategies, financial instruments or leverage.

The term "hedge fund" goes back to the 1950s, when the first hedge funds were established. These funds were designed to be neutral to general market movements. Their investment strategy was to combine short and long positions to hedge some of the market risk and thus to achieve absolute returns in different market conditions. Nowadays, they no longer just "hedge" since they apply a wide range of investment strategies. They make intensive use of short selling and of complex financial instruments such as derivatives.

The term "highly leveraged institution" is also of limited value in terms of defining the entity it designates.[2] At a rough estimate, HLIs have an average leverage of 1.4.[3] This is indeed a much higher leverage than traditional investment funds have, for which there are strict restrictions on indebtedness. In Switzerland, for instance, traditional investment funds are only allowed to have a leverage of up to 0.1, and this only on a temporary basis. However, a leverage of 1.4 is low compared to large international banks which have a leverage of ten to fifty.

In terms of market share, the role of HLIs is less important than is generally believed although, in the last few years, their activity has grown tremendously. Since 1999, HLI assets under management have increased by a factor of five. An important driving factor has been the increased inflows from institutional investors. Currently there are some 9,000 HLIs with assets under management of about USD 1,600 billion.[4] Despite these impressive figures, the HLI industry remains modest in relative terms. HLIs have a market share which is smaller than the trading books of the five largest international banks and they represent only a fragment of the total debt securities (USD 65,000 billion) and credit default swaps outstanding (USD 25,000 billion). However, more important is the activity of HLIs in some market segments, especially in the more complex ones. In the markets for credit default swaps, distressed debt and emerging market bonds, for instance, roughly half of the trading volume can be attributed to HLIs. In the more traditional markets for interest rate derivatives and mortgage-backed securities, their share drops to only 10% again.[5]

2. The benefits of HLIs

HLIs have undoubtedly been a source of innovation in the global asset management industry, especially with regard to traded credit products. Moreover, through their flexible and largely unconstrained investment approaches as well as through their extensive use of innovative financial instruments, they have contributed to improving the efficiency of price discovery in financial markets. By buying assets that are perceived to be undervalued and by selling assets that are perceived to be overvalued, HLIs help to move mispriced assets toward their fundamental values.

HLIs play an important role in trading and distributing risk. Thus, they enhance market liquidity, perhaps even in periods of stress, when nobody else is willing to take risks. Moreover, by helping to spread market and credit risks more widely, they may increase the resilience of large banks.

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[2] Unlike regulated investment funds, HLIs can use leverage without any restrictions; in other words, they can borrow to increase the capital available for investment. If a HLI had capital of USD 1 and borrowed a further USD 1, it could invest a total of USD 2. In this example, leverage would be 1. In other words, leverage is the ratio of debt to equity capital.

[3] McCarthy, 2006.

[4] Financial Stability Forum, 2007.

[5] De Nederlandsche Bank, 2007, table 1.

HLIs have proved to be quite robust to stock market drops. In stress situations in the last decade, the HLI industry incurred less losses than stock indices. The exception was the Russian crisis in 1998 with the collapse of LTCM.

3. Are HLIs a threat to financial stability?

In this section I analyse first, whether HLIs represent a *direct* risk to financial stability and second, whether there are transmission channels through which HLIs could *indirectly* weaken either systemically important banks or the banking sector as a whole.

As already mentioned, the size of the HLI industry is comparatively small, from both an individual and an aggregate point of view. Moreover, the HLI industry is highly segmented and there is a broad range of different investment strategies. And, even more important, HLIs play no role in traditional financial intermediation, i.e., they are not involved in the savings and loans business. Hence, the failure of one or more important HLIs would not directly encumber the real economy. HLIs do not represent a direct threat to financial stability.

The main concern with regard to financial stability is that the failures of one or more large HLIs could have a severe impact on systemically important banks and, as such, constitute an *indirect* threat to the financial system. We see two channels through which such a shock could be transmitted to the banking sector.[6]

First transmission channel: banks as counterparties and creditors

By providing leverage, acting as counterparty or serving as prime brokers, large international banks are directly exposed vis-à-vis HLIs. When a HLI incurs losses, this has a direct impact on the bank. Depending on the size of the open position vis-à-vis the HLI, this might threaten the bank's solvency in an extreme case. The effective risk emanating from HLIs depends primarily on the margin and collateral requirements set by the banks. These requirements help not only to constrain losses but also to determine the amount of leverage HLIs are allowed to use. Moreover, banks can partially hedge their risk and diversify their exposures. In general, we do not see a substantial difference between banks' exposures to HLIs and other risky exposures, such as, for instance, derivatives. Both make high demands on banks' risk management and their value may react sharply to market movements because of leverage. Investments in HLIs are thus comparable to other risky investments.

Let us now have a look at the collapse of LTCM – by far the largest hedge fund to date – in order to obtain some idea of the potential disruptive capacity of HLIs. Almost all of the fund's capital was destroyed in the collapse. Losses amounted to USD 4.4 billion, of which USD 1.9 billion were incurred by the manager of the hedge fund, USD 0.7 billion by UBS and USD 1.8 billion by other investors. Moreover, if the Federal Reserve Bank of New York had not intervened to organise a bailout, the hedge fund's counterparties would have incurred estimated losses of about USD 5 billion.[7] Although these amounts seem high, they are in fact modest in relation to the involved banks' capital and to the size of the financial markets.

Second transmission channel: banks as price takers on financial markets

HLIs act as buyers and sellers on the financial markets. Their actions have an impact on prices, liquidity and volatility in just the same way as any other market participant's action. However, there are two reasons why the impact of HLI trading could be stronger. First, in certain market segments they have an above-average share in trading volume. Second, margin calls can force HLIs with a high leverage and a focus on derivatives to liquidate large positions in a very short period of time. In stressful market conditions, both of these phenomena could further depress market prices, reduce market liquidity and increase volatility. This is the second transmission channel through which HLIs may amplify shocks and spread negative effects in the banking sector.

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[6] See also Hildebrand, 2007.

[7] The President's Working Group on Financial Markets, 1999, page 17.

Let us again have a look at the LTCM case in order to assess the disruptive capacity of HLIs through this second transmission channel. The President's Working Group on Financial Markets concluded, «nor were LTCM's exchange positions of such magnitude that a default by it would have caused significant disruptions of the U.S. exchange-traded futures market.»[8] For over-the-counter (OTC) traded products there are no reliable numbers. It is, however, known that the majority of OTC contracts were collateralised.[9] An upper bound for the non-collateralised positions is the above-mentioned loss of USD 5 billion, which is presumably too small a number to create a severe crisis in other OTC segments.

Moreover, we should not forget that hundreds of hedge funds are liquidated every year without any negative impact. Also, the collapse of a large hedge fund, Amaranth, in autumn 2006 had only a small impact on the financial markets.

To summarise, HLIs themselves cannot be seen as direct risk to financial stability, at least not at their present stage of development. However, there are two potential transmission channels through which shocks on HLIs could spread to large international banks. If these shocks are large and banks are not robust enough, then the stability of the financial system could be at risk. However, available data and experience with failures of larger HLIs in the past suggest that the disruptive capacity of HLIs is rather limited.

4. Should HLIs be regulated?

As we discussed earlier, the HLI industry itself does not appear to be a threat to financial stability. However, the failure of one or more large HLIs could – primarily via credit exposures – weaken a systemically important bank which, in turn, could weaken the financial system. This potential chain reaction, however, does not in itself prove the need for regulation. This challenge can be met by other initiatives.

First of all, there is market discipline. Market discipline can compensate for a lack of regulation. I assume market discipline to be more effective in the case of HLIs than in the case of banks for three reasons: (a) Investors in HLIs are generally well informed and relatively “sophisticated”, (b) the number of investors is small and (c) HLIs do not constitute an industry regarded as worth being rescued in terms of the public interest. However, we should make sure that market discipline works. This requires that creditors and investors receive sufficient and timely information from HLIs and that they act upon this information. It is up to the prime brokers, for instance, to make collateral and margin requirements dependant on the transparency and risk profile of their HLI counterparties.

Second, the private and official sector can make a contribution to regulation by developing best practice guidelines – or recommendations – for HLIs and large international banks acting as counterparties. A good example of recommendations for and by the HLI industry are the “Sound Practices for Hedge Fund Managers”, developed by the Managed Fund Association[10]. This is a promising approach, and the Financial Stability Forum (FSF)[11] thus encourages "the global hedge fund industry (to) review and enhance existing sound practice benchmarks for hedge fund managers in the light of expectations for improved practices set out by the official and private sectors". [12] A further private sector initiative, even if it is not focussed specifically on HLIs, is the extensive report of the Counterparty Risk Management Policy Group II[13] with guiding principles on risk management, risk monitoring and enhanced transparency for financial institutions.

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8 The President's Working Group on Financial Markets, 1999, page C-12.

9 The President's Working Group on Financial Markets, 1999, page 18.

10 The Managed Fund Association (MFA) is the U.S.-based trade association representing the interests of the alternative investment industry such as hedge funds and fund of funds.

11 The FSF was established by the G7 finance ministers and central bank governors in 1999 to promote international financial stability through enhanced information exchange and international cooperation in financial market supervision and surveillance.

12 Financial Stability Forum, 2007.

13 The Counterparty Risk Management Policy Group II (CRMPG) is comprised of senior officials from major financial institutions.

As mentioned above, I do not see HLIs as a direct threat to financial stability. The Achilles heel of the system is the link between HLIs and banks of systemic importance. Thus, the systemic risks originating from HLIs are better addressed through indirect measures aimed at the HLIs' counterparties and creditors, which are mostly large international banks. This has the advantage that best practice guidelines are focussed directly on the transmission channels through which the risk would be propagated and on the institutions which are cornerstones from a financial stability perspective.

An example of guidelines for the counterparties and creditors of HLIs is the May 2007 report by the FSF. The FSF published recommendations to address potential financial system risks relating to HLIs. The focus of the report is clearly placed on systemic risks. Investor protection issues associated with institutional or retail investments in HLIs are not addressed.

The aim of the two most important FSF recommendations (no. 1 and no. 2) is to mitigate the two transmission channels discussed above: First, core intermediaries – i.e. large international banks – should strengthen counterparty risk management practices as they are directly exposed to HLIs (first transmission channel). Second, core intermediaries should improve their robustness to the potential erosion of market liquidity (second transmission channel). Moreover, the FSF suggests that supervisors evaluate whether the link between HLIs and banks should be better monitored. The UK Financial Services Authority, for instance, conducts a six-monthly survey of prime broker dealers' exposure to hedge funds. Finally, the FSF encourages counterparties and investors to demand accurate and timely portfolio valuations and risk information from HLIs in order to strengthen market discipline. At present, HLIs disclose information to their investors and counterparties, but the level of disclosure varies considerably. The best practice guidelines issued by the Managed Fund Association aim at guaranteeing a minimum level of transparency. It is evident, however, that there are also limits to disclosure. A detailed disclosure of all portfolio positions in good time might be neither feasible nor desirable as it would force HLIs to give away proprietary information which is essential for their business.

The recommendations by the FSF are an important contribution to the international debate on how to deal with HLIs. The correct measurement and proper management of the risk inherent in HLIs is crucial. Counterparties and creditors of HLIs are thus firmly requested to carry out regular stress tests designed to simulate risk exposures and liquidity during periods of stress. In assessing these risks, particular attention should be given to the liquidity profile of hedge funds and how margins are agreed upon and – in the event of market turbulence – how they are adjusted. Such stress tests could help to assess the risks of disorderly unwinding in adverse market situations, and enhance the understanding of how third parties impact market prices and liquidity.

There may be situations in which intervention by a regulator is justified. The protection of less sophisticated retail “investors” who are indirectly – through pension funds – exposed to HLIs might be a legitimate concern. However, regulations are better implemented on the pension fund side by the relevant regulator than by directly regulating HLIs themselves.[14]

A realistic assessment of the systemic importance and the disruptive capacity of HLIs leads us to the conclusion that direct prudential regulation would be difficult to justify. There is no market failure which needs to be addressed through regulatory measures. Thus the apparent benefits to be delivered by regulation appear not to justify the related costs, such as reduced market efficiency and slower financial innovation. Furthermore, the HLI industry is very heterogeneous and many funds are registered in exotic off-shore locations and, hence, beyond the jurisdiction of the main regulators. Therefore, we doubt that direct regulation is feasible and superior to market discipline or to a best practice approach.

5. Conclusions

The HLI industry has become increasingly important in recent years. In some market segments, especially in more complex ones, a large share of trading volume is attributed to HLIs. However, measured by assets under management, the HLI industry is still small compared to traditional investment funds and the trading books of large international banks. Because of its modest size, its

[14] See also The President's Working Group on Financial Markets, 2007, recommendation 5.

heterogeneity and its absence from the field of financial intermediation, the HLI industry is no direct threat to financial stability. Nevertheless, there are two channels through which a shock occuring in the HLI industry could be transmitted to systemically relevant banks. First, banks are exposed to HLIs in their role as counterparties and creditors. Second, in periods of stress, banks may suffer from a lack of market liquidity and a decline in prices, and this may be aggravated by HLIs. Potential regulatory measures should therefore focus on the link between the HLI and the banking industry. Of particular importance is that banks simulate their risk exposures to HLIs and the liquidity situation in periods of stress. We encourage the private sector to take the initiative and come up with measures which will enhance market discipline and strengthen banks' resilience to losses from HLIs and adverse market situations. At present, we do not see a need for direct regulation of HLIs. However, central banks and regulatory authorities will closely follow developments in the HLI industry, in particular the initiatives taken by market participants to mitigate spillovers to the banking industry.

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